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<b>TRANSMITTAL FORM</b> <i>(to be used for all correspondence after initial filing)</i>	Application Number	10/612,661
	Filing Date	July 2, 2003
	First Named Inventor	Jong-Hwan Lee
	Art Unit	3748
	Examiner Name	Binh Q. Tran
Total Number of Pages in This Submission	Attorney Docket Number	GP-303538 (8540R-000041)

ENCLOSURES (check all that apply)		
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm or Individual name	Harness, Dickey & Pierce, P.L.C.	Attorney Name Mark A. Frentrup	Reg. No. 41,026
Signature	Mark A. Frentrup		
Date	Feb 9, 2005		

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EV 570 162 975 US



**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No.: 10/612,661  
Filing Date: July 2, 2003  
Applicant: Jong-Hwan Lee  
Group Art Unit: 3748  
Examiner: Binh Q. Tran  
Title: PARTIAL OXIDATION OF ALCOHOLS  
Attorney Docket: GP-303538 (HDP 8540R-000041)

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**Reply to Restriction Requirement**

Sir:

In response to the Requirement for Restriction mailed January 26, 2005, Applicants elect Group II (claims 22-28 drawn to a method of lowering NO<sub>x</sub> emissions) with traverse.

Although Inventions I, II and III are patentably distinct, they are related in that they are disclosed as capable of use together. In part, the invention is based on the discovery that certain catalysts efficiently oxidize an alcohol partially to an aldehyde or ketone. Claims 1-13 and claims 14-21 disclose methods of partially oxidizing alcohol to an aldehyde or ketone with special applications to the partial reduction of ethanol to acetaldehyde. Claims 22-30 and 31-38 are drawn to methods of lowering NO<sub>x</sub> emissions by carrying out the partial oxidation method of claims 1-21, and combining

the reaction product with exhaust gas upstream of a catalytic converter. Claim 39-48 recite a control system for NO<sub>x</sub> reduction containing an internal combustion engine that produces exhaust gas and a catalytic converter. The control system further contains a source of ethanol and an oxidizing catalyst assembly that is capable of carrying out the reduction method of claims 1-21. The function of the control system of claims 39-48 is to provide a system for carrying out the methods of lowering NO<sub>x</sub> emissions as recited in claims 22-38.

On the basis of the above discussion, it is seen that the Inventions I, II, and III are described as capable of use together. Accordingly, Applicants respectfully request that the Examiner withdraw the Restriction Requirement and examine the three inventions together.

The Examiner is invited to telephone the undersigned Applicants representative if that would be helpful to resolving any issues.

Respectfully submitted,

Dated: 2/9/2005

By: Mark A. Frentrup  
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